



## Wisconsin Department of Transportation

[www.dot.wisconsin.gov](http://www.dot.wisconsin.gov)

Jim Doyle  
Governor

Frank J. Busalacchi  
Secretary

Division of State Patrol  
4802 Sheboygan Ave., Rm. 551  
PO Box 7912  
Madison, WI 53707-7912

Telephone: 608-266-3212  
FAX: 608-267-4495

**Thank you**

**Sheriff Thomas Dalbec**

**and Keith Kesler**

**for hosting WICORTS**

# Strategies for Statewide Interoperability

Presenter:

John F. Verhyen EE, WICORTS Chairperson

Chief Engineer, State Patrol, Bureau of  
Communications

[john.verhyen@dot.state.wi.us](mailto:john.verhyen@dot.state.wi.us)

**608-267-3573**

# Executive Order #87

Thank You **Governor Doyle**

For

Signing Executive Order #87

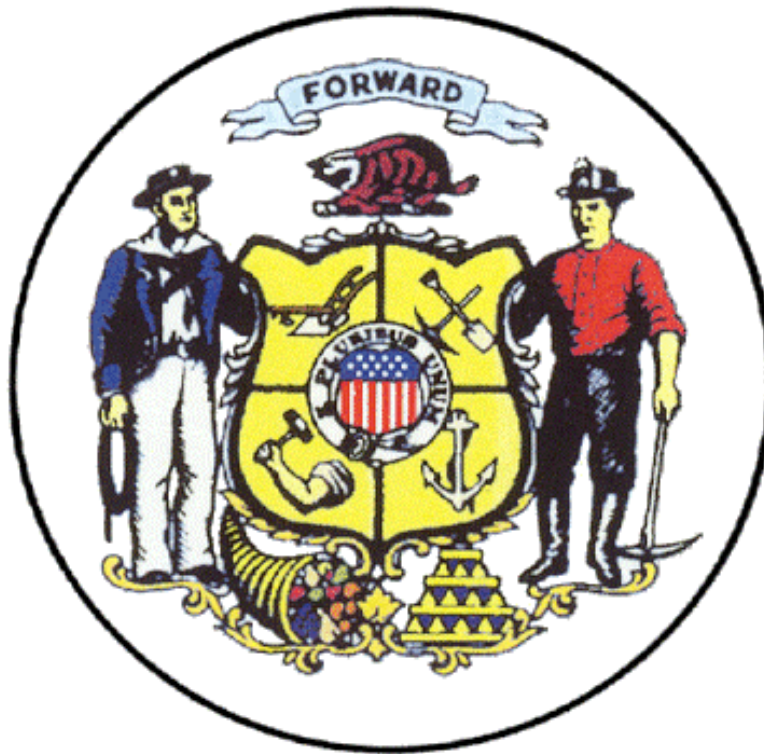
Forming an SIEC

Effective February 2, 2005

A very positive move towards “Communications  
Interoperability” in Wisconsin

# SIEC

**State Interoperability Executive Council**



# Confused?

## **The Roadmap to Interoperability**

“The Roadmap to Interoperability” document was compiled for informational purposes only in response to requests from several public safety agencies and it has not been endorsed by the SIEC.

WICORTS exists to share information with all public safety agencies to help them make intelligent decisions in regard to radio communications for their agency.

The SIEC exists to make executive decisions on statewide communications implementations and oversight. WICORTS will support these decisions.

## **Communications Planning Group**

The State Patrol and eight other state agencies have partnered together for the purpose of developing a strategic plan and ultimate implementation plan that will take the state agencies into the 21<sup>st</sup> century. They are calling themselves the Communications Planning Group.

This group will be cognizant of what the local agencies are doing and what the SIEC parameters and mandates will be. Any strategic or implementation plans developed by the Communications Planning Group will be submitted to the SIEC for approval/disapproval before any significant implementation would begin.

# There is no perfect interoperability and never will be!

There is no perfect vendor.

There is no perfect weather.

There is no perfect frequency band.

There is no perfect frequency.

There is no perfect tower site.

There is no perfect protocol.

There is no perfect standard.

There is no perfect radio.

There is no perfect funding.

There is no perfect implementation.

There is no perfect operation.

There is no perfect network.

There are no perfect users. Sorry !

There is no perfect whining.

Doing something is always better  
than doing nothing

When you get to the end of your rope  
tie a knot and hang on

A person who aims at nothing  
is sure to hit it

There can be no rainbow without  
a cloud and a storm

There is no failure except in no  
longer trying

**O.K.**

**I think we are where we need to be.**

**How about pulling up our boot straps and  
start doing the things that can be done ?**

# How Do We Get Started?

Adjust our attitudes and mindsets.

Look past county and municipal borders and care how we affect our neighbors.

Work together and share resources.

Hold regular meetings to maintain consistent planning efforts.

Use common sense when making decisions that are driven by user groups and technical staff and only look to vendors for information, ballpark pricing and the implementation process before you select a system.

Keep costs down by doing joint purchases and negotiating prices.

Purchase equipment that is upgradeable to the FE statewide recommendation for P25 VHF Trunking.

Get MOU's in place between participating agencies that not only address the present but also the future.

Have a single point of contact for information on the ongoing activities involved with planning and implementation.

Pursue the different funding options that are available starting with grants, fees, surcharges, base budgets and bonding. Private Sector donations may be another alternative.



# Who Should Be Involved?

## Local, County and Regional Projects

### **Executive Level: Keep informed from beginning**

SIEC, County Administrators, County Boards, Mayors, City Councils, Fire Chiefs, Police Chiefs, EMS Directors, Public Works Directors, Emergency Management Directors, Tribal Nation Leaders, State Agency Heads and Federal Agency Heads, Legislators, Governor's Office.

### **Technical Level: Planning and Implementation**

Single Point of Contact, Engineers, Technicians, Purchasing agent, Attorney, Information Officer, and user representatives.

### **User Level:**

User groups that represent all Public Safety disciplines and agencies.

## Statewide Projects

All of the above items pertain to any statewide projects as well.

# **Let's take a look at how a statewide implementation might affect Douglas Co.**

Let's assume the state implements a true interoperability backbone (controllers, multiplexers, repeater stations, and associated hardware and software).

Douglas County can keep your interoperability at status quo.

Douglas County can request access to the backbone when ever it is completed in your area.

Douglas County can request an analog connection and talk group into the backbone until it does migrate onto the statewide system.

Douglas County does not have to ever come on the system or have an analog connection into the backbone.

Douglas County can purchase any radio protocol or functionality you want as long as you use your own money.

Douglas County can determine its own subscriber equipment purchasing timeline.

Douglas County can continue planning for your immediate needs.

Douglas County can make careful purchases that will allow you a migration path to any future statewide implementation.

The P25 suite of standards should be completed by March of 2006. The system interface should be completed by the end of 2005. The rest of the standards, including the console interface, will be completed shortly after.

There may be a charge to have full featured operations on the statewide system.

There will probably be no charge for single talk group connectivity.

P25 is the protocol that the SIEC is supporting.

Many systems are moving towards P25.

Federal agencies are mandated to purchase P25 equipment for new implementations.

The DNR and State Patrol have or will be making large P25 purchases in the near future.

# Why Is An RFP So Important?

The best way to define your system and get answers to questions before negotiating any contract.

You can ask questions and demand written answers.

Areas that need to be discussed further can be isolated and negotiated.

You can compare the information between responders.

You can define the future as well as the present.

You can set baseline parameters that must be met.

You can ask for desired items that a Vendor may or may not be able to produce.

The weight of the scoring can be on the information you receive in the proposal and not on the cost.

You can require detailed descriptions, drawings and schematics that allow you to make in depth comparisons of the system operation.

You can negotiate the contract based on the points of agreement that were covered in the RFP.

You can require Warranty definitions and explanations or define the Warranty yourselves.

You can define after Warranty software and hardware maintenance support.

# Why Is An RFP So Important?

If purchasing new narrowband compliant radios you may minimally want to include P25 upgradeable as a feature with the best case scenario being upgradeable to P25 encryption and P25 trunking as well.

Be sure to demand in writing that the radios you purchase be **software** upgradeable to any of the present, changed or additional Phase I P25 standards as they become mandated.

Require this to be done at **no** cost to the customer. Definitely get this in writing!!!

These requirements should be addressed immediately in the procurement process so an agreement is in place early.

If you require a hardware and/or software maintenance agreement, you may want to consider including it into the total cost package. This will allow you to spread the annual maintenance costs out over a period of time as part of the payment schedule, eliminate any unnecessary increase in costs over the life of the maintenance agreement and allow you to do more meaningful planning for the future.

Before you make a purchase contact some present users and get information on any implementation problems they had. It is getting more common that equipment does not operate properly right out of the box. Most problems can be resolved with some field adjustments but you must be aware of them before you can fix them.

# Believe It or Not !

Agencies are moving forward with their interoperability plans

David Steingraber, Director – Office of Justice Assistance accepted responsibilities that parallel those of a Statewide Inoperability Coordinator.

Governor Doyle has established the State Interoperability Executive Council (SIEC) and seated 15 public safety executives on this Council.

David Steingraber accepted the Chairperson position on the SIEC.

The Federal Engineering study recommending VHF trunking was completed.

Six focus group meetings have been held throughout the state by the SIEC for the purpose of understanding the needs of local and state agencies.

A number of separate engineering studies for local agencies and regions have been completed.

A number of consortiums have been established for the purpose of joint purchases, implementations, and operations.

The SIEC held a vendor's meeting which gave attendee's the opportunity to ask questions about their products and related issues as standards.

The **State Patrol** in cooperation with CTA Communications is working on a study that will provide the state with a useable statewide frequency plan to assure a successful VHF statewide interoperable communications network implementation. The study is about 20% completed.

The **State Patrol** and the **Department of Natural Resources** have partnered with seven other state agencies to do joint planning for upgrading their communications systems. This partnership will be called the “Communications Planning Group” and they will hold regular meetings to be scheduled as needed. The meetings will be held on a Weekday from 9:00 A.M. to 12:00 P.M. The meetings are open to any public safety agency and any interested parties but will focus on the state agencies.

The **Northeast Wisconsin Communications** (NEWCOM) consortium made up of sixteen counties is getting agreements in place for joint procurements. The initial procurement will be for MARC and WISPERN base/repeater stations to be put at a strategic tower site in each of the sixteen counties. They will be P25 upgradeable to trunking base/repeater stations.

The **Southeast Wisconsin Communication Resource/Support Group** (SEWCRSG) has been meeting since 1999. Some of the latest initiatives include the formation of a regional Telecommunication Emergency Response Team and a web-based data-sharing program for the purpose of mutual aid. SEWCRSG is also in the process of formalizing to become a 501c organization and is creating a Web site for public access. Training was made available for all dispatchers of the southeast area for low or no cost and during times favorable to 24/7 operations. The last class was available several times and in different locations with excellent attendance.

The **West Central Interoperability Alliance** (WCIA) is working on the first phase of their interoperability efforts. When competitive Homeland Security grant funds became available in 2004, a coalition of Emergency Management Directors and Public Safety Dispatch Center officials met in West Central Wisconsin to determine if a regional alliance with common goals and expectations would enhance the likelihood of receiving funding. An alliance was formed that largely reflected the make-up of the Wisconsin Emergency Management West Central Region, thus was called the West Central Interoperability Alliance. The counties involved in the project are Buffalo, Chippewa, Clark, Dunn, Eau Claire, Jackson, La Crosse, Monroe, Pierce, Pepin, St Croix, Trempealeau and the Ho-Chunk Nation. In the first phase, the WCIA applied for funding to conduct a communication study of the region. La Crosse County Emergency Management Director Keith Butler was chosen to be the project director for the study grant.

“The project provided a great way for us to work together as a team,” says Butler. “All the agencies got together for a common good.” Elert and Associates from Stillwater, Minnesota, was selected to conduct the engineering study. Representatives from all public safety agencies, Amateur Radio (ARES/RACES), hospitals, and many other key stakeholders met locally and at periodic regional meetings. These meetings proved to be extremely helpful as first responders who could be expected to be ‘thrown into the same mix’ during a disaster were meeting together to discuss, plan and coordinate a regional radio network.

The **State Patrol** is preparing an initiative that will update the present statewide microwave system from approximately 670 channels to approximately 2000 channels. This will allow for more low density data applications to be transported over the network.



**FoxComm** is the public safety communication system of the four counties' partnership consisting of Brown, Calumet, Outagamie and Winnebago located in Northeast Wisconsin. FoxComm was formed in response to the desire of these four counties to consolidate their emergency communications equipment and data to avoid duplication of services, personnel, facilities, and equipment. Additionally, FoxComm has an objective to advance public safety in these four counties by sharing pertinent information about perpetrators, terrorists and CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives) element possession and acts. The FoxComm team was needed to break down geographic borders, provide dispatchers and field units with more information to do their jobs, provide technical backup and expertise across the region. This allowed for improved planning, training and implementation through standardization.

In 1999, forward thinking leaders from each of the four counties joined together to address these issues and with a Memoranda of Understanding formed FoxComm. Through joint efforts of a regional planning committee consisting of representatives from law enforcement, fire protection and safety, emergency management, governmental administration, emergency medical services, public safety communications, and HazMat, FoxComm became a reality. As a regional initiative, over 33 law enforcement agencies, 72 fire departments and 33 emergency medical districts are represented in this four county system. Servicing a four county population of approximately 556,000, these agencies create an average of 35,000 records each month.

FoxComm is governed by a Fiscal Advisory Board, which has oversight authority. A User Technical Committee (UTC) provides recommendations and technical information to the Fiscal Advisory Board. Daily FoxComm issues are managed by a Management Information Coordinator.

To date, the FoxComm system consists of a Computer Aided Dispatch system (CAD) and multiple individual Records Management System (RMS). FoxComm's initial project links all four counties together with one joint CAD program. This CAD system interfaces to multiple fire and law enforcement Record Management Systems. FoxComm is also deploying Wireless E911 for its counties Fall 2005.

Enhancing the safety of the citizens is the goal of each law enforcement agency, specifically as it relates to collecting data to identify criminal and terrorist activity. Perpetrators and terrorists do not perform acts repeatedly in the same location, they cross jurisdictional lines. Thus, FoxComm is participating in the WIJIS initiative to directly assist these agencies accomplish

The County Executives and Administrator represented in the FoxComm project are committed to represent and serve their constituents in the most effective manner possible. They have listened to all the people and all groups in the general public, the County Commissioners, the elected County officials, county employees, business leaders, the Chambers of Commerce and industry prospects. They carefully weighed what everyone was asking for. As the FoxComm Counties' leaders, they are making sure the right things happen, in a fair and honest manner to insure the continued growth and prosperity of their respective county and citizens. Evidence of long-term, local public commitment to the FoxComm project, as well as the team's commitment to expand services in the future, if conditions allow, is evident in the Intergovernmental Agreement Regarding FoxComm that can be attached if necessary.

DNR

# Suggested Resources

**Wisconsin Interoperability Web Page**     <http://www.siec.wi.gov>

## Federal Interoperability General Information

Organizations that provide interoperability solutions support and education:

- Comm Tech Program ([www.commtechprogram.org](http://www.commtechprogram.org))
- Joint Tactical Radio System ([jtrs.army.mil](http://jtrs.army.mil))
- GAO Report on interoperable communications ([www.gao.gov/new.itmes/d04740.pdf](http://www.gao.gov/new.itmes/d04740.pdf))
- National Incident Management System (NIMS) training ([training.fema.gov/EMIWEB/IS/is700.asp](http://training.fema.gov/EMIWEB/IS/is700.asp))
- National Law Enforcement and Corrections Technology Center ([www.nlectc.org](http://www.nlectc.org))
- SAFECOM ([www.safecomprogram.gov](http://www.safecomprogram.gov))

## SAFECOM Federal Partners

Federal departments working towards interoperable communications:

- Department of Agriculture ([www.usda.gov](http://www.usda.gov))
- Department of Defense ([www.defenselink.mil](http://www.defenselink.mil))
- Department of Energy ([www.doe.gov](http://www.doe.gov))
- Department of Health and Human Services ([www.hhs.gov](http://www.hhs.gov))
- Department of Homeland Security ([www.dhs.gov](http://www.dhs.gov))
- Department of the Interior ([www.doi.gov](http://www.doi.gov))
- Department of Justice ([www.usdoj.gov](http://www.usdoj.gov))
- Department of the Treasury ([www.ustreas.gov](http://www.ustreas.gov))

## Grants Information

- Department of Homeland Security ([www.dhs.gov/dhspublic/display?theme=18](http://www.dhs.gov/dhspublic/display?theme=18))
- National Institute of Justice ([www.ojp.usdoj.gov/nij/funding.htm](http://www.ojp.usdoj.gov/nij/funding.htm))
- Office of Community Oriented Policing Services ([www.cops.usdoj.gov](http://www.cops.usdoj.gov))
- Office of Domestic Preparedness ([www.ojp.usdoj.gov/odp/grants\\_programs.htm](http://www.ojp.usdoj.gov/odp/grants_programs.htm))

## Communications Spectrum

Federal agencies that manage the commercial and public communications spectrum:

- Federal Communications Commission ([wireless.fcc.gov/publicsafety](http://wireless.fcc.gov/publicsafety))
- National Telecommunications and Information Administration ([www.ntia.doc.gov](http://www.ntia.doc.gov))

## Technology and Standards Information

Standards bodies working to promote interoperable communications technology:

- Association of Public-Safety Communications Officials International ([www.apcointl.org](http://www.apcointl.org))
- Capital Wireless Integrated Network (CapWIN) ([www.capwin.org](http://www.capwin.org))
- Institute of Electrical and Electronics Engineers ([www.ieee.org](http://www.ieee.org))
- International Telecommunication Union ([www.itu.int](http://www.itu.int))
- National Institute of Justice's Technology Programs ([www.ojp.usdoj.gov/nij/sciencetech](http://www.ojp.usdoj.gov/nij/sciencetech))
- National Institute of Standards and Technology ([www.nist.gov](http://www.nist.gov))
- Project 25 ([www.project25.org](http://www.project25.org))
- Project Mobility for Emergency and Safety Applications (MESA) ([www.projectmesa.org](http://www.projectmesa.org))
- Telecommunications Industry Association ([www.tiaonline.org](http://www.tiaonline.org))